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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,410	07/08/2004	Whitney Turrel Weller		4409
36746	7590	11/02/2006		
WHITNEY TURREL WELLER 4 TAMARIND LANE EXETER, NH 03833			EXAMINER NGUYEN, TU T	
			ART UNIT 2877	PAPER NUMBER

DATE MAILED: 11/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.		Applicant(s)	
	10/710,410		WELLER, WHITNEY TURREL	
	Examiner		Art Unit	
	Tu T. Nguyen		2877	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-10 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 08 July 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____ | 6) <input type="checkbox"/> Other: ____ |

DETAILED ACTION

Abstract

Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The abstract of this application has more than 150 words.

Claim Objections

Claims 1-10 are objected to because of the following informalities:

The body of the claims should **not have any period.**

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-10 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

To meet the requirements of 35 U.S.C. §101, "(t)he claimed invention as a whole must accomplish a practical application. That is, it must produce a useful, concrete and tangible result." M.P.E.P. § 2106(II)(A) (quoting *State Street Bank & Trust v. Signature Financial Group, Inc.*, 149 F.3d 1368, 1373, 47 USPQ2d 1596, 1601 (Fed. Cir. 1998)).

Claims 1-10 appear to be **an abstract idea rather than a practical application of the idea. Claims 1-10 do not result in a physical transformation nor does it appear to provide a useful, concrete and tangible result.** Therefore, claims 1-10 appear non-statutory. Further, Claims 8-10 fail to include transformation from one physical state to another. Although, the claims appear useful and concrete, there does not appear to be a tangible result claimed. Merely locating a fault in a transmission lines or comparing historical or calculate results for each of the second transmission lines, would not appear to be sufficient to constitute a tangible result, since the outcome of the locating the fault step has not been used in a disclosed practical application not made available in such a manner that its usefulness in a disclosed practical application can be realized. As such, the subject matter of the claims is not patent eligible.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-10 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

With respect to claim 1, it is not clear how the system locating the fault as claimed. How do the claimed elements (OTN, FTTP OTDR,...) are connected? What is the "FTTP Test Algorithm"? Claim 1 seems to be an abstract idea and look more like a description of the invention. The scope of the claim is not clear. It is not clear what elements, applicant try to claim.

With respect to claims 2-7, the claims are also rejected as being depended on a rejected claim.

With respect to claims 8-10, the phrase "causing individual attenuation to a plurality of transmission lines ..." is not clear. It is not clear how to "cause individual attenuation to a plurality of transmission lines"?

Since the claims are not clear, examiner assume that applicant try to claim a method for detecting fault of a plurality of transmission lines in a communication system comprising the steps of: transmitting a test signal to the transmission lines, which

connected to a first device and a branching/coupling device; detecting individual attenuation of the plurality of the transmission lines; locating fault of the transmission lines based on the a delay time of the reflected test signal and the attenuation of the reflected signal.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Horishita et al (6,534,997) in view of Keeble (5,187,362).

With respect to claims 1,8-9, Horishita discloses a test system for locating a fault of a transmission line. The system comprises: an OTDR 6A (fig 3) for transmitting a test signal to a feeder transmission line 4 (fig 3); a branching/coupling device 3 (fig 3) for connecting the feeder transmission line 4 (fig 3) to a plurality of transmission lines 5-1,...,5-n (fig 3); detecting reflected signals and locating the fault location based on the changing of the attenuation and the return time of the reflected signal (abstract).

Horishita does not explicitly disclose detecting fault based on a delay time of the reflected signal. Keeble disclose a system for detecting loss in a branched optical fiber. The system comprises: detecting the time between an input signal and the reflected signal (delay time as claimed) (column 1, lines 10-20) for locating the location of a fault.

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It would have been obvious to modify Horishita with Keeble to facilitate the measurement.

With respect to claim 2, Horishita discloses the claimed optical transmission lines and connection between the first transceiver device 4 (fig 3), the coupler 3 (fig 3) and the second transmission lines 5-1,...,5-n (fig 3). Horishita does not disclose the claimed FTTP Test Algorithm means. Since Horishita discloses locating a fault of a transmission line, Horishita would have to have the claimed FTTP Test Algorithm means to perform testing.

With respect to claims 3-7, Horishita does not explicitly disclose the claimed FTTP Test Algorithm means. However, it would have been obvious to modify Horishita with different FTTP Test Algorithm means for different intended uses.

With respect to claim 10, refer to discussion in claim 1 above for the method of locating fault. Horishita discloses comparing the attenuation to historical results S4 (fig 14). Horishita does not disclose causing individual attenuation through destructive or constructive resonance. It would have been obvious to modify Horishita by causing individual attenuation through destructive or constructive resonance as claimed to use the system in different environments.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tu T. Nguyen whose telephone number is (571) 272-2424. The examiner can normally be reached on T-F 7:30-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Toatley Jr. can be reached on (571) 272-2800 Ext. 77. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Tu T. Nguyen
Primary Examiner
Art Unit 2877

10/28/2006